

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Yoel ARIELI, et al.

Serial No.: 09/829,435

Group No.: 2877

Filed: April 9, 2001

Examiner: --

For: SPATIAL AND SPECTRAL WAVEFRONT ANALYSIS AND MEASUREMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8(a)

I hereby certify that the attached correspondence comprising:

ACKNOWLEDGE POSTCARD
INFORMATION DISCLOSURE STATEMENT
FORM PTO-1449
U.S. PROVISIONAL PATENT APPLICATION SERIAL NO.: 60/196,862
TWENTY-FOUR (24) REFERENCES
EIGHT (8) ARTICLES

is being deposited with the United States Postal Service, with sufficient postage, as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

December 21, 2001

Clifford J. Mass
(type or print name of person mailing paper)

Signature of person mailing paper

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Art Unit (N/A)
Yoel ARIEL, et al : Examiner (N/A)
Serial No. 09/829,435 : Washington, D.C.
Filed April 9, 2001 : December 10, 2001
For SPATIAL AND SPECTRAL WAVEFRONT : Docket No. U-013396-8
ANALYSIS AND MEASUREMENT

INFORMATION DISCLOSURE STATEMENT (IDS)

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir

This Information Disclosure Statement is submitted in accordance with 37 C.F.R. 1.97-1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

A. This IDS should be considered, in accordance with 37 C.F.R. 1.97, as it is filed

(Check one of the boxes A-D)

B. within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application

C. before the mailing date of a first office action on the merits

D. after (A) and (B) above, but before final rejection or allowance, and Applicants have made the necessary certification (box "I" below) or paid the necessary fee (box "II" below)

(Check one of the boxes "I" and "II" below.)

I. Counsel certifies that, upon information and belief, each item of information listed herein was either (a) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS, or (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.

¶ 2. In accordance with 37 C.F.R. 1.98, this IDS includes a list (e.g., form PTO-1449) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached, except as explained below.

(check boxes A and or B and fill in blanks, if appropriate)

|| A Document(s) _____ is (are) deemed substantially cumulative to document(s) _____, and, in accordance with 198(e), only a copy of each of the latter documents is enclosed.

[] B Certain documents were previously cited by or submitted to the Office in the following prior application(s), which are relied upon under 35 U.S.C. 120:

[insert serial numbers and filing dates of prior applications]

Applicant identifies these documents by attaching hereto copies of the forms PTO-892 and PTO-1449 from the files of the prior application(s) or a fresh PTO-1449 listing these documents, and request that they be considered and made of record in accordance with 198(d). Per 37 CFR 198(d), copies of these documents need not be filed in this application.

[] 3 Document(s) is/are not in the English language. In accordance with 198(e), Applicant states

|| An English translation of each document (or of the pertinent portions thereof), or a copy of each corresponding English-language patent or application, or English-language abstract (or claim) is enclosed

|| A concise explanation of the relevance of document(s) ... is found in the attached search report (see reply to Comment 68 in the preamble to the final rules, 1135 OG 13 at 20).

[[A concise explanation of the relevance of document(s) is set forth as follows
[Insert concise explanation of relevance]]

ii) A concise explanation of the relevance of document(s) can be found on pages _____ of the specification

Concise explanation of document(s) can be found on the attached sheet.

4. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules, 1135 OG 13 at 20).

II. 5. Other information being provided for the examiner's consideration follows

6. In accordance with 37 C.F.R. 1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

CROSS REFERENCE UNDER 37 C.F.R. §1.78 TO RELATED APPLICATIONS

Pursuant to 37 C.F.R. § 1.78, Applicant notes that the above-identified patent application may be related to the following U.S. Patent Applications.

(b) U.S. Provisional Patent Application Serial no. 60/196,862, entitled "Phase manipulations for spatial and spectral analysis and measurement", filed April 12, 2000.

Respectfully submitted,

JULIAN H. COHEN
LADAS AND PARRY
26 WEST 61ST STREET
NEW YORK, NY 10023
REG. NO: 20,302
(212)708-1887

FORM PTO-1449 (Colb)

ATTY DOCKET NO

SERIAL NUMBER

U-013396-8

09 829 435

LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
STATEMENT

APPLICANT
Yoel ARIEL, et al

SEARCHED

FILING DATE

GROUP ART UNIT

April 9, 2001

2877

U.S. PATENT DOCUMENTS

| Examiner's Initials | DOCUMENT NO | DATE | NAME | CLASS | SUB | FILING DATE |
|---------------------|-------------|----------|------------------|-------|-----|-------------|
| AA | 5,969,855 | Oct 1999 | Ishiwata, et al | 359 | 386 | |
| AB | 5,969,853 | Oct 1999 | Takaoka | 359 | 370 | |
| AC | 5,936,253 | Aug 1999 | Sugaya | 250 | 548 | |
| AD | 5,870,191 | Feb 1999 | Shirley, et al | 345 | 356 | |
| AE | 5,814,815 | Sep 1998 | Matsumoto, et al | 250 | 311 | |
| AF | 5,751,475 | May 1998 | Ishiwata, et al | 359 | 387 | |
| AG | 5,619,372 | Apr 1997 | Hellmuth, et al | 359 | 389 | |
| AH | 5,600,440 | Feb 1997 | Bendall | 356 | 345 | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NO | DATE | COUNTRY | CLASS | SUB | TRANSLATION |
|-------------|------------|---------|-------|-----|-------------|
| AI | JP 9230247 | 9/1997 | Japan | | |
| AI | JP 9179029 | 7/1997 | Japan | | |
| AK | JP 8094936 | 4/1996 | Japan | | |

OTHER ART (including Author, Title, Patent/Pages, Etc.)

AM Phillion D W "General Methods for Generating Phase-Shifting Interferometry Algorithms", Applied Optics, Vol. 36, 8098 (1997)

AM Pluta M "Stray-Light Problem in Phase Contrast Microscopy or Toward Highly Sensitive Phase Contrast Devices - A review", Optical engineering, Vol. 32, 3199 (1993)

EXAMINER

DATE CONSIDERED

EXAMINER Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

FORM PTO-1449 (Colb)

ATTY DOCKET NO

SERIAL NUMBER

U-013396-8

09 829,435

LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
STATEMENT

APPLICANT
Yoel ARIEH, et al.

FILING DATE

GROUP ART UNN

April 9, 2001

2877

U.S. PATENT DOCUMENTS

| Examiner's Initials | DOCUMENT NO | DATE | NAME | CLASS | SUB | FILING DATE |
|------------------------|-------------|-----------|----------------|-------|-----|----------------|
| AA | 5,471,303 | Nov 1995 | Ar, et al | 356 | 357 | |
| AB | 5,446,540 | Aug. 1995 | Lin | 356 | 345 | |
| AC | 5,235,587 | Apr 1993 | Bearden, et al | 369 | 106 | |
| AD | 4,407,569 | Oct 1983 | Piller, et al | 350 | 509 | |
| AH | 4,190,366 | Feb 1980 | Doyle | 356 | 346 | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NO | DATE | COUNTRY | CLASS | SUB | TRAN- SLATION |
|-------------|------------|---------|-------|-----|------------------|
| AF | JP 7261089 | 10/1995 | Japan | | |
| AG | JP 7225341 | 8/1995 | Japan | | |
| AH | JP 6186504 | 7/1994 | Japan | | |

OTHER ART (including Author Bills, Pertinent Pages, Etc.)

AI Noda T. and Kawata S., "Separation of Phase and Absorption Images in Phase-Contrast Microscopy", Journal of the Optical Society of America A, Vol. 9, 924 (1992)

AJ Creath K., "Phase Measurement Interferometry Techniques", Progress in Optics XXVI, 348 (1988)

AK Greivenkamp J.E., "Generalized Data Reduction for heterodyne Interferometry", Optical Engineering, Vol. 23, 350 (1984)

AM Morgan C.J., "Least-Squares Estimation in Phase-Measurement Interferometry", Optics Letters, Vol. 7, 368 (1982)

EXAMINER

DATE CONSIDERED

EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

FORM PTO-1449 (Colb)

ATTY DOCKET NO

SERIAL NUMBER

U-015396-8

09 829,435

LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
STATEMENT

APPLICANT
Yoel ARIEL, et al

FILING DATE

GROUP ART UNIT

April 9, 2001

2877

U.S. PATENT DOCUMENTS

| Examiner's Initials | DOCUMENT NO | DATE | NAME | CLASS | SUB | FILING DATE |
|------------------------|-------------|----------|---------------|-------|-----|----------------|
| AA | 5,159,474 | Oct 1992 | Franke, et al | 359 | 29 | |
| AB | 5,777,736 | Jul 1998 | Horton | 356 | 346 | |
| AC | 4,653,921 | Mar 1987 | Kwon | 356 | 353 | |
| AD | | | | | | |
| AE | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NO | DATE | COUNTRY | CLASS | SUB | TRANS- LATION |
|-----------------|--------|---------------|-------|-----|------------------|
| AF EP 0 555 099 | 8/1993 | Europe | | | 25 |
| AG GB 2,315,700 | 2/1998 | Great Britain | | | |

AH

OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

AI Golden E J "Zernike Test I: Analytical Aspects", Applied Optics, Vol. 16, 205 (1977)

AI Bruning J H, et al, "Digital Wavefront Measuring Interferometry for Testing Optical Surfaces and Lenses", Applied Optics, Vol. 13, 2693 (1974)

AK

AL

EXAMINER

DATE CONSIDERED

EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant